

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

690 Walnut Ave.St. 150

Vallejo, CA 94592-1133

(707) 649-5453

(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027224**Date Inspected:** 16-Feb-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Steve Jensen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower Base 13 meters diaphragm weld joint number W101 and W119, ABF welder Wai Kitlai was observed continuing to perform 1G Shielded Metal Arc Welding (SMAW) welding root pass on the 45mm thick outer East diaphragm plate to 60mm shear plate T-joint. The welder was noted using 3/16" diameter E7018H4R implementing Welding Procedure Specification (WPS) ABF-WPS-D15-1160 with measured working current of 207 amps. Prior welding, the welder has preheated the plates (W101) to required preheat temperature of more than 150 degrees Fahrenheit and 225 degrees °F on W119 using a propylene gas torch. During welding, ABF QC Steve Jensen was noted monitoring the welder. After completing weld joint number W101, the welder has moved to weld joint location W119 and performed welding of root pass on the 45mm thick inner East diaphragm plate to 70mm East Tower shaft. The welder was noted preheating the plates to more than 225 degrees Fahrenheit prior welding as required. At the end of the shift, root pass SMAW welding was completed on both PJP weld joints.

At Tower Base 13 meters diaphragm weld joint number W103 and W120 ABF welder Jin Pei Wang was observed continuing to perform 1G Shielded Metal Arc Welding (SMAW) welding root pass on the 45mm thick outer East diaphragm plate to 60mm shear plate T-joint. The welder was noted using 5/32" diameter E7018H4R implementing Welding Procedure Specification (WPS) ABF-WPS-D15-1160 with measured working current of 170 amps. Prior welding, the welder has preheated the plates to required preheat temperature of more than 150 degrees Fahrenheit using a propylene gas torch. During welding, ABF QC Steve Jensen was noted monitoring the

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welder. After completing weld joint number W103, the welder has moved to weld joint location W120 and performed welding of root pass on the 45mm thick inner East diaphragm plate to 70mm North Tower shaft. The welder was noted preheating the plates to more than 225 degrees Fahrenheit prior welding as required. At the end of the shift, root pass SMAW welding was completed on both PJP weld joints.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC MT on the root pass of the Partial Joint Penetration (PJP) welding of South diaphragm plate to shear plate T- joint. The QA verification was performed to verify that the welding and the MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the weld and the QC inspection complied with the contract documents.

1. W117 Outer East diaphragm plate to shear plate – root pass QA VT/MT verified



Summary of Conversations:

Since the 45mm thick inner East diaphragm plate to 70mm thick North and East Tower shaft skin plates (W119 and W120) PJP T-joints were preheated to 225 degrees Fahrenheit and root welded but was not preheated continuously and maintained as required by Section C of Field Welding of Caltrans Special Provisions, an Incident Report will be generated concerning this issue.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer
